

ABSTRACT OF THE DISCLOSURE

A read-only memory cell (ROM) and a fabrication method thereof. The cell comprises a substrate, a plurality of bit lines, a plurality of bit line oxides, a gate dielectric layer and a word line. The bit lines are formed near the surface of the substrate. The bit line oxides are disposed over the bit lines. The gate dielectric layer is disposed over the substrate between the bit lines and further comprises a silicon-rich oxide layer. The word line is disposed over the bit line oxides and the gate dielectric layer.